Supplementary Table S1. Summary of sensitivity analysis of subgroup analysis of effect estimate in relapse rate

Factors	Subgroup	Studies	Participants	Effect estimate	Overall effect	Heterogeneity	
				[95% CI]	P-value	I^2	<i>P</i> -value
Overall		13	902	1.96 [1.23 – 3.12]	0.005*	27%	0.18
Study duration	≥ 1 year	6	616	1.96 [1.00 – 3.84]	0.05*	61%	0.02
	< 1 year	7	286	$1.95 \; [0.80 - 4.77]$	0.14	0%	0.84
	> 1 year	1	70	1.34 [0.53 - 3.36]	0.54	NA	NA
	≤1 year	13	832	2.09 [1.24 - 3.55]	0.006*	29%	0.17
Mean age	> 40 years	6	248	$1.02 \; [0.50 - 2.07]$	0.96	0%	0.83
	≤ 40 years	6	625	2.56 [1.38 - 4.75]	0.003*	41%	0.13
	\geq 40 years	7	307	1.38[0.75 - 2.55]	0.30	0%	0.51
	< 40 years	5	566	2.46 [1.16 – 5.24]	0.02*	52%	0.08
Mean illness duration	> 10 years	6	197	1.44 [0.62 - 3.36]	0.40	0%	0.79
	≤ 10 years	4	504	2.79[1.29 - 6.03]	0.009*	60%	0.06
	$\geq 10 \text{ years}$	7	256	1.90 [0.95 - 3.80]	0.07	0%	0.71
	< 10 years	3	445	2.73 [0.99 – 7.51]	0.05	73%	0.03
Antipsychotic dose after reduction	> 200 mg/day	7	345	1.07 [0.57 - 2.02]	0.83	0%	0.90
	\leq 200 mg/day	4	504	2.79 [1.29 – 6.03]	0.009*	60%	0.06
	\geq 200 mg/day	8	594	1.42 [0.88 - 2.29]	0.15	0%	0.77
	< 200 mg/day	3	255	3.29 [1.02 – 10.58]	0.05*	71%	0.03

Abbreviations: NA, not applicable

Notes: * P < 0.05

Supplementary Table S2. Summary of subgroup analysis of effect estimate in relapse rate among studies with higher post-reduction dose

Factors	Subgroup	Studies	Participants	Effect estimate	Overall effect	Heterogeneity	
				[95% CI]	P-value	I^2	<i>P</i> -value
Overall		7	345	1.85 [1.12 – 3.05]	0.83	0%	0.90
Publication year	2003-	4	267	0.90 [0.38 – 2.13]	0.80	0%	0.79
	-2002	3	78	1.32[0.52-3.37]	0.56	0%	0.68
Illness stability	Stable	3	233	0.90 [0.38 - 2.13]	0.80	0%	0.79
	Unstable	2	41	2.05 [0.40 - 10.43]	0.39	0%	0.55
Mean age	> 40 years	6	248	1.02 [0.50 - 2.07]	0.96	0%	0.83
	≤ 40 years	1	97	1.31 [0.31 – 5.53]	0.72	NA	NA
Treatment setting	Outpatient only	2	134	1.15[0.47 - 2.82]	0.76	0%	0.83
	Inpatient only	1	23	1.09 [0.08 - 15.41]	0.95	NA	NA
Mean treatment duration	> 10 years	2	60	1.07[0.37 - 3.05]	0.90	0%	0.99
	≤ 10 years	0	0	NA	NA	NA	NA
Antipsychotic type	FGAs	3	78	1.32[0.52-3.37]	0.56	0%	0.68
	SGAs	3	233	0.90 [0.38 - 2.13]	0.80	0%	0.79
Antipsychotic formulation	Oral	4	256	0.91 [0.40 - 2.08]	0.83	0%	0.92
	LAI	2	55	1.36 [0.50 - 3.69]	0.55	0%	0.39
Mean symptom severity	> Mild	3	209	0.95 [0.47 - 1.94]	0.89	0%	0.77
	≤ Mild	3	113	1.99 [0.38 – 10.30]	0.41	0%	0.52
Duration of reduction	> 2 months	5	266	0.96 [0.48 - 1.91]	0.91	0%	0.91
	\leq 2 months	2	85	2.14 [0.30 – 15.40]	0.45	0%	0.40

Abbreviations: FGAs, first-generation antipsychotics; LAI, long-acting injectable; NA, not applicable; SGA, second-generation antipsychotics Notes: *P < 0.05

Supplementary Table S3. PRISMA checklist

Section/topic	#	Checklist item	Reported on page #		
TITLE					
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1		
ABSTRACT	ABSTRACT				
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2		
INTRODUCTION					
Rationale	3	Describe the rationale for the review in the context of what is already known.	3		
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3		
METHODS					
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	NA		
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4-5		
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	4-5		
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	4		
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	4		
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for	4		

		obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	4-5
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	6
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	6
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	NA*
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	6
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	7 & Supplementary Figure S2
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	7 & Table 1
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	7 & Supplementary Figure S3A
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	NA*
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	7-8 & Table 3 & Supplementary Figure S4
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	NA*

Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	8 & Table 4 & Supplementary Table S1-2 & Figure 1 & Supplementary Figure S5-7		
DISCUSSION					
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	9		
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	12		
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	12-13		
FUNDING					
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	14		

Notes: *This meta-analysis did not assess the quality of the body of evidence according to the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach as they were supposed to be unsuitable to do for this study given that the aim of this study focused more on elucidating the factors associated with successful antipsychotic dose reduction than the relapse rates of dose reduction as a whole.

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